

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/990,046A  
Source: 1FW16  
Date Processed by STIC: 3/28/05

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 03/28/2005

PATENT APPLICATION: US/09/990,046A

TIME: 09:11:50

Input Set : A:\P1405R1C1.txt

Output Set: N:\CRF4\03282005\I990046A.raw

3 <110> APPLICANT: de Sauvage, Frederic  
 4 Carpenter, David A.  
 6 <120> TITLE OF INVENTION: Patched-2 Antibodies  
 8 <130> FILE REFERENCE: P1405R1C1  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/990,046A  
 C--> 11 <141> CURRENT FILING DATE: 2001-11-20  
 13 <150> PRIOR APPLICATION NUMBER: US 60/081,884  
 14 <151> PRIOR FILING DATE: 1998-04-15  
 16 <160> NUMBER OF SEQ ID NOS: 24  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 4030  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Homo sapiens  
 23 <400> SEQUENCE: 1  
 24 gttatttcag gccatggtgt tgcgccgaat taattcccga tccagacatg 50  
 26 ataagataca ttgatgagtt tggacaaacc acaactagaa tgcagtgaag 100  
 28 aaaatgcttt atttgtgaaa tttgtgatgc tattgcttta tttgtaacca 150  
 30 ttataagctg caataaaca gttgggccat ggccggccaag cttctgcagg 200  
 32 tcgactctag aggatccccg gggaattccg gcatgactcg atcgccgcc 250  
 34 ctccagagagc tgcccccgag ttacacaccc ccagctcgaa ccgcagcacc 300  
 36 ccagatccta gctgggagcc tgaaggctcc actctggctt cgtgcttact 350  
 38 tccagggcct gctcttctct ctgggatgag ggatccagag acattgtggc 400  
 40 aaagtgtctt ttctgggact gttggccttt ggggcccctg cattaggtct 450  
 42 ccgcatggcc attattgaga caaacttggg acagctctgg gtagaagtgg 500  
 44 gcagccgggt gagccaggag ctgcattaca ccaaggagaa gctgggggag 550  
 46 gaggctgcat acacctctca gatgctgata cagaccgcac gccaggaggg 600  
 48 agagaacatc ctccaccccg aagcacttgg cctccacctc caggcagccc 650  
 50 tcatgcccag taaagtccaa gtatcactct atgggaagtc ctgggatttg 700  
 52 aacaaaatct gctacaagtc aggagttccc cttattgaaa atggaatgat 750  
 54 tgagtggatg attgagaagc tgtttccgtg cgtgatcctc acccccctcg 800  
 56 actgcttctg ggaggggagc aaactccaag ggggctccgc ctacctgccc 850  
 58 ggccgcccgg atatccagtg gaccaacctg gatccagagc agctgctgga 900  
 60 ggagctgggt ccctttgcct cccttgaggg cttccgggag ctgctagaca 950  
 62 aggcacaggt gggccaggcc tacgtggggc ggccctgtct gcaccctgat 1000  
 64 gacctccact gccacactag tgcccccaac catcacagca ggcaggctcc 1050  
 66 caatgtggct cagcagctga gtgggggctg ccatggcttc tcccacaaat 1100  
 68 tcatgcactg gcaggaggaa ttgctgctgg gaggcagggc cagagacccc 1150  
 70 caaggagagc tgctgagggc agaggccctg cagagcacct tcttgctgat 1200  
 72 gagtccccgc cagctgtacg agcatttccg gggtgactat cagacacatg 1250  
 74 acattggctg gagtgaggag caggccagca cagtgtctaca agcctggcag 1300  
 76 cggcgctttg tgcagctggc ccaggaggcc ctgcctgaga acgcttccca 1350  
 78 gcagatccat gccttctcct ccaccacct ggatgacatc ctgcatgctg 1400  
 80 tctctgaagt cagtgtgtgc cgtgtgggtg gaggctatct gctcatgctg 1450

p.6

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82 gcctatgcct gtgtgaccat gctgcggtgg gactgcgccc agtcccaggg 1500
84 ttccgtgggc ctgcccgggg tactgctggt ggccctggcg gtggcctcag 1550
86 gccttgggct ctgtgccctg ctgcgcatca ccttcaatgc tgccactacc 1600
88 caggtgctgc ttttcttggc tctgggaatc ggcgtggatg acgtattcct 1650
90 gctggcgcat gccttcacag aggctctgcc tggcaccctt ctccaggagc 1700
92 gcatgggcga gtgtctgcag cgcacgggca ccagtgtcgt actcacatcc 1750
94 atcaacaaca tggccgcctt cctcatggct gccctcgttc ccatccctgc 1800
96 gctgcgagcc ttctccctac aggcggccat agtggttggc tgcaccttg 1850
98 tagccgtgat gcttgtcttc ccagccatcc tcagcctgga cctacggcgg 1900
100 cgccactgcc agcgccttga tgtgctctgc tgcttctcca gtccctgctc 1950
102 tgctcaggtg attcagatcc tgccccagga gctgggggac gggacagtac 2000
104 cagtgggcat tgcccacctc actgccacag ttcaagcctt taccactgt 2050
106 gaagccagca gccagcatgt ggtcaccatc ctgcctcccc aagcccacct 2100
108 ggtgccccca ccttctgacc cactgggctc tgagctcttc agccctggag 2150
110 ggtccacacg ggaccttcta ggccaggagg aggagacaag gcagaaggca 2200
112 gcctgcaagt ccctgccctg tgcccgtgg aatcttgccc atttcgccc 2250
114 ctatcagttt gcccgttg tgcctcagtc acatgccaag gccatcgtgc 2300
116 tgggtgctct tgggtgctct ctgggcctga gcctctacgg agccaccttg 2350
118 gtgcaagacg gcctggccct gacggatgtg gtgcctcggg gcaccaagga 2400
120 gcatgccttc ctgagcgcgc agctcaggta cttctccctg tacgaggtgg 2450
122 ccctggtgac ccagggtggc ttgactacg cccattccca acgcgcctc 2500
124 tttgatctgc accagcgctt cagttccctc aaggcgggtg tgccccacc 2550
126 ggccacccag gcaccccgca cctggctgca ctattaccgc aactggctac 2600
128 agggaatcca ggctgccttt gaccaggact gggcttctgg gcgcatcacc 2650
130 cgccactcgt accgcaatgg ctctgaggat ggggcccctg cctacaagct 2700
132 gctcatccag actggagacg cccaggagcc tctggatttc agccagctga 2750
134 ccacaaggaa gctggtggac agagagggac tgattccacc cgagctcttc 2800
136 tacatggggc tgaccgtgtg ggtgagcagt gaccccctgg gtctggcagc 2850
138 ctcacaggcc aacttctacc ccccacctc tgaatggctg cagacaaat 2900
140 acgacaccac gggggagaac ctctgcaccc cgccagctca gcccttggag 2950
142 tttgcccagt tccccttcc tctgcgtggc ctccagaaga ctgcagactt 3000
144 tgtggaggcc atcgaggggg cccgggcagc atgcgcagag gccggccagg 3050
146 ctggggtgca cgcctacccc agcggctccc ccttctctt ctgggaacag 3100
148 tatctgggcc tgcggcgtg ctctctgctg gccgtctgca tcctgctggt 3150
150 gtgcactttc ctctgtgtg ctctgctgct cctcaacccc tggacggctg 3200
152 gcctcatagt gctggtcctg gcgatgatga cagtggaact ctttgggtatc 3250
154 atgggtttcc tgggcatcaa gctgagtgcc atcccctgg tgatccttgt 3300
156 ggccctctga ggcattggcg ttgagttcac agtccacgtg gctctgggct 3350
158 tcctgaccac ccagggcagc cggaacctgc gggccgcca tgcccttgag 3400
160 cacacatttg ccccctgac cgatggggcc atctccacat tgctgggtct 3450
162 gctcatgctt gctggttccc actttgactt cattgtaagg tacttctttg 3500
164 cggcgtgac agtgcctcag ctctgggccc tcctccatgg actcgtgctg 3550
166 ctgcctgtgc tgctgtccat cctgggccc cgccagagg tgatacagat 3600
168 gtacaaggaa agcccagaga tcctgagtc accagctcca cagggaggcg 3650
170 ggcttaggtg gggggcatcc tcctccctgc cccagagctt tgccagagtg 3700
172 actacctcca tgaccgtggc catccaccca cccccctgc ctggtgccta 3750
174 catccatcca gcccctgatg agcccccttg gtcccctgct gccactagct 3800
176 ctggcaacct cagttccagg ggaccaggtc cagccactgg gtgaaagagc 3850
178 agctgaagca cagagacat gtgtggggcg tgtggggtca ctgggaagca 3900

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180 ctgggtctgg tgtagacgc aggacggacc cctggagggc cctgctgctg 3950
182 ctgcatcccc tctcccgacc cagctgtcat gggcctccct gatatcgaat 4000
184 tcaatcgata gaaccgaggt gcagttggac 4030
186 <210> SEQ ID NO: 2
187 <211> LENGTH: 1203
188 <212> TYPE: PRT
189 <213> ORGANISM: Homo sapiens
191 <400> SEQUENCE: 2
192 Met Thr Arg Ser Pro Pro Leu Arg Glu Leu Pro Pro Ser Tyr Thr
193 1 5 10 15
195 Pro Pro Ala Arg Thr Ala Ala Pro Gln Ile Leu Ala Gly Ser Leu
196 20 25 30
198 Lys Ala Pro Leu Trp Leu Arg Ala Tyr Phe Gln Gly Leu Leu Phe
199 35 40 45
201 Ser Leu Gly Cys Gly Ile Gln Arg His Cys Gly Lys Val Leu Phe
202 50 55 60
204 Leu Gly Leu Leu Ala Phe Gly Ala Leu Ala Leu Gly Leu Arg Met
205 65 70 75
207 Ala Ile Ile Glu Thr Asn Leu Glu Gln Leu Trp Val Glu Val Gly
208 80 85 90
210 Ser Arg Val Ser Gln Glu Leu His Tyr Thr Lys Glu Lys Leu Gly
211 95 100 105
213 Glu Glu Ala Ala Tyr Thr Ser Gln Met Leu Ile Gln Thr Ala Arg
214 110 115 120
216 Gln Glu Gly Glu Asn Ile Leu Thr Pro Glu Ala Leu Gly Leu His
217 125 130 135
219 Leu Gln Ala Ala Leu Thr Ala Ser Lys Val Gln Val Ser Leu Tyr
220 140 145 150
222 Gly Lys Ser Trp Asp Leu Asn Lys Ile Cys Tyr Lys Ser Gly Val
223 155 160 165
225 Pro Leu Ile Glu Asn Gly Met Ile Glu Trp Met Ile Glu Lys Leu
226 170 175 180
228 Phe Pro Cys Val Ile Leu Thr Pro Leu Asp Cys Phe Trp Glu Gly
229 185 190 195
231 Ala Lys Leu Gln Gly Gly Ser Ala Tyr Leu Pro Gly Arg Pro Asp
232 200 205 210
234 Ile Gln Trp Thr Asn Leu Asp Pro Glu Gln Leu Leu Glu Glu Leu
235 215 220 225
237 Gly Pro Phe Ala Ser Leu Glu Gly Phe Arg Glu Leu Leu Asp Lys
238 230 235 240
240 Ala Gln Val Gly Gln Ala Tyr Val Gly Arg Pro Cys Leu His Pro
241 245 250 255
243 Asp Asp Leu His Cys Pro Pro Ser Ala Pro Asn His His Ser Arg
244 260 265 270
246 Gln Ala Pro Asn Val Ala His Glu Leu Ser Gly Gly Cys His Gly
247 275 280 285
249 Phe Ser His Lys Phe Met His Trp Gln Glu Glu Leu Leu Leu Gly
250 290 295 300
252 Gly Met Ala Arg Asp Pro Gln Gly Glu Leu Leu Arg Ala Glu Ala

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253		305		310		315
255	Leu Gln Ser Thr	Phe Leu Leu Met Ser	Pro Arg Gln Leu Tyr	Glu		
256		320		325		330
258	His Phe Arg Gly	Asp Tyr Gln Thr His	Asp Ile Gly Trp Ser	Glu		
259		335		340		345
261	Glu Gln Ala Ser	Thr Val Leu Gln Ala	Trp Gln Arg Arg Phe	Val		
262		350		355		360
264	Gln Leu Ala Gln	Glu Ala Leu Pro Glu	Asn Ala Ser Gln Gln	Ile		
265		365		370		375
267	His Ala Phe Ser	Ser Thr Thr Leu Asp	Asp Ile Leu His Ala	Phe		
268		380		385		390
270	Ser Glu Val Ser	Ala Ala Arg Val Val	Gly Gly Tyr Leu Leu	Met		
271		395		400		405
273	Leu Ala Tyr Ala	Cys Val Thr Met Leu	Arg Trp Asp Cys Ala	Gln		
274		410		415		420
276	Ser Gln Gly Ser	Val Gly Leu Ala Gly	Val Leu Leu Val Ala	Leu		
277		425		430		435
279	Ala Val Ala Ser	Gly Leu Gly Leu Cys	Ala Leu Leu Gly Ile	Thr		
280		440		445		450
282	Phe Asn Ala Ala	Thr Thr Gln Val Leu	Pro Phe Leu Ala Leu	Gly		
283		455		460		465
285	Ile Gly Val Asp	Asp Val Phe Leu Leu	Ala His Ala Phe Thr	Glu		
286		470		475		480
288	Ala Leu Pro Gly	Thr Pro Leu Gln Glu	Arg Met Gly Glu Cys	Leu		
289		485		490		495
291	Gln Arg Thr Gly	Thr Ser Val Val Leu	Thr Ser Ile Asn Asn	Met		
292		500		505		510
294	Ala Ala Phe Leu	Met Ala Ala Leu Val	Pro Ile Pro Ala Leu	Arg		
295		515		520		525
297	Ala Phe Ser Leu	Gln Ala Ala Ile Val	Val Gly Cys Thr Phe	Val		
298		530		535		540
300	Ala Val Met Leu	Val Phe Pro Ala Ile	Leu Ser Leu Asp Leu	Arg		
301		545		550		555
303	Arg Arg His Cys	Gln Arg Leu Asp Val	Leu Cys Cys Phe Ser	Ser		
304		560		565		570
306	Pro Cys Ser Ala	Gln Val Ile Gln Ile	Leu Pro Gln Glu Leu	Gly		
307		575		580		585
309	Asp Gly Thr Val	Pro Val Gly Ile Ala	His Leu Thr Ala Thr	Val		
310		590		595		600
312	Gln Ala Phe Thr	His Cys Glu Ala Ser	Ser Gln His Val Val	Thr		
313		605		610		615
315	Ile Leu Pro Pro	Gln Ala His Leu Val	Pro Pro Pro Ser Asp	Pro		
316		620		625		630
318	Leu Gly Ser Glu	Leu Phe Ser Pro Gly	Gly Ser Thr Arg Asp	Leu		
319		635		640		645
321	Leu Gly Gln Glu	Glu Glu Thr Arg Gln	Lys Ala Ala Cys Lys	Ser		
322		650		655		660
324	Leu Pro Cys Ala	Arg Trp Asn Leu Ala	His Phe Ala Arg Tyr	Gln		
325		665		670		675

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327 Phe Ala Pro Leu Leu Leu Gln Ser His Ala Lys Ala Ile Val Leu
328                               680                               685                               690
330 Val Leu Phe Gly Ala Leu Leu Gly Leu Ser Leu Tyr Gly Ala Thr
331                               695                               700                               705
333 Leu Val Gln Asp Gly Leu Ala Leu Thr Asp Val Val Pro Arg Gly
334                               710                               715                               720
336 Thr Lys Glu His Ala Phe Leu Ser Ala Gln Leu Arg Tyr Phe Ser
337                               725                               730                               735
339 Leu Tyr Glu Val Ala Leu Val Thr Gln Gly Gly Phe Asp Tyr Ala
340                               740                               745                               750
342 His Ser Gln Arg Ala Leu Phe Asp Leu His Gln Arg Phe Ser Ser
343                               755                               760                               765
345 Leu Lys Ala Val Leu Pro Pro Pro Ala Thr Gln Ala Pro Arg Thr
346                               770                               775                               780
348 Trp Leu His Tyr Tyr Arg Asn Trp Leu Gln Gly Ile Gln Ala Ala
349                               785                               790                               795
351 Phe Asp Gln Asp Trp Ala Ser Gly Arg Ile Thr Arg His Ser Tyr
352                               800                               805                               810
354 Arg Asn Gly Ser Glu Asp Gly Ala Leu Ala Tyr Lys Leu Leu Ile
355                               815                               820                               825
357 Gln Thr Gly Asp Ala Gln Glu Pro Leu Asp Phe Ser Gln Leu Thr
358                               830                               835                               840
360 Thr Arg Lys Leu Val Asp Arg Glu Gly Leu Ile Pro Pro Glu Leu
361                               845                               850                               855
363 Phe Tyr Met Gly Leu Thr Val Trp Val Ser Ser Asp Pro Leu Gly
364                               860                               865                               870
366 Leu Ala Ala Ser Gln Ala Asn Phe Tyr Pro Pro Pro Pro Glu Trp
367                               875                               880                               885
369 Leu His Asp Lys Tyr Asp Thr Thr Gly Glu Asn Leu Arg Ile Pro
370                               890                               895                               900
372 Pro Ala Gln Pro Leu Glu Phe Ala Gln Phe Pro Phe Leu Leu Arg
373                               905                               910                               915
375 Gly Leu Gln Lys Thr Ala Asp Phe Val Glu Ala Ile Glu Gly Ala
376                               920                               925                               930
378 Arg Ala Ala Cys Ala Glu Ala Gly Gln Ala Gly Val His Ala Tyr
379                               935                               940                               945
381 Pro Ser Gly Ser Pro Phe Leu Phe Trp Glu Gln Tyr Leu Gly Leu
382                               950                               955                               960
384 Arg Arg Cys Phe Leu Leu Ala Val Cys Ile Leu Leu Val Cys Thr
385                               965                               970                               975
387 Phe Leu Val Cys Ala Leu Leu Leu Leu Asn Pro Trp Thr Ala Gly
388                               980                               985                               990
390 Leu Ile Val Leu Val Leu Ala Met Met Thr Val Glu Leu Phe Gly
391                               995                               1000                               1005
393 Ile Met Gly Phe Leu Gly Ile Lys Leu Ser Ala Ile Pro Val Val
394                               1010                               1015                               1020
396 Ile Leu Val Ala Ser Val Gly Ile Gly Val Glu Phe Thr Val His
397                               1025                               1030                               1035
399 Val Ala Leu Gly Phe Leu Thr Thr Gln Gly Ser Arg Asn Leu Arg

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 03/28/2005  
PATENT APPLICATION: US/09/990,046A      TIME: 09:11:51

Input Set : A:\P1405R1C1.txt  
Output Set: N:\CRF4\03282005\I990046A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 20,27,135,156,210

Seq#:4; N Pos. 143

Seq#:6; N Pos. 13,14

**VERIFICATION SUMMARY**

DATE: 03/28/2005

PATENT APPLICATION: US/09/990,046A

TIME: 09:11:51

Input Set : A:\P1405R1C1.txt

Output Set: N:\CRF4\03282005\I990046A.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:446 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
M:341 Repeated in SeqNo=3  
L:471 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:100  
L:502 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0